

Adoption of soil and water conservation practices in arable lands by the farmers of rainfed agro-eco system

Abstract: Soil and water are the major natural resources endangered with erosion, which need to be conserved for existence of life. Soil and rainfall characteristics in the state is highly diversified, necessitating efficient conservation. In-situ conservation practices can help in low rainfall areas to protect these resources. Ex-situ conservation practices are essential in sustaining agriculture in rainfed ecosystem and safe disposal of excess water is the concern in high rainfall coastal areas. Contour farming, deep tillage once in 2-3 years under crop rotation using tractor drawn implements like Disc Plough, Mould Board Plough and Chisel Plough, inter-terrace management through bunding and vegetative barriers based on the rainfall intensity, slope and texture of the soil, broad bed furrows in black soil, moisture conservation furrows/dead furrows, mulching with crop residue/ weeds, community based water harvesting structures, scooping can help for conservation of soil and water resources. Planning crops depending on the length of growing period, efficient use of water through the adoption of micro-irrigation, conveying through pipes, conjunctive use with rain and poor quality water, irrigation at critical stages, diversified cropping based on land use capability, water availability period and contingent practices under weather aberrations can help for improving the productivity and water use efficiency.

Keywords: Cropping system, Rainfed agriculture, Soil conservation, Water planning